

Reduction of Harmful Chemicals

- Reduction of beneficial species. Chemical application will affect non-target organisms, including predators and parasites of pests resulting in a biological imbalance.
- Groundwater contamination. Pesticides and fertilizers can be carried away from the application site through excessive water runoff and enter the water table.
- Bioaccumulation, magnification of chemicals in the food chain. The amount of pesticides consumed may be passed along the food chain, increasing the concentration of chemicals within the body.
- Somatic damage on human health. Excessive use and reliance on chemicals will lead to mutation of genes causing various cancers and disease. (Kent, 1991).

What is Drip Irrigation?

- Drip irrigation preserves water and prevents runoff
- Drip irrigation will direct water right to the roots of the plants, less water will be wasted and a sufficient amount will be absorbed, increasing productivity
- The design will consist of a new form of drip irrigation with monitored use of chemicals, such as fertilizers and pesticides, to ensure productive crops in a more compact environment

How Does Drip Irrigation Help?

- Saves water, and money. Drip irrigation can distribute a precise amount of water to the roots of plants. With no overspray or evaporation loss as compared to sprinklers, this help backyard farmers save money on water bills.
- Eliminates runoff and erosion. Water is penetrated through the soil, directly to the roots of plants. This eliminates puddles and over-saturated ground to prevent mosquitoes from breeding. Owners will also have full control of the amount of water used.
- Controls weed. Water is delivered below the surface of the soil, leaving no water for weeds to grow.
- Low cost. Not only does drip irrigation save on water bill, but it is also an inexpensive tool. (Northern Garden Supply, 2004).

Eliminate Soil Degradation

Decline in soil qualities commonly caused through improper use by humans (ISSS, 1996).

This includes physical, chemical and/or biological deterioration:

- loss of organic matter; decline in soil fertility
- decline in structural conditions; erosion
- adverse changes in salinity, acidity or alkalinity
- the effects of toxic chemicals, pollutants or excessive flooding